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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,838	03/06/2002	Dean C. Alberson	0455FV.45576	8562

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EXAMINER

FLANDRO, RYAN M

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,838

Applicant(s)

ALBERSON ET AL.

Examiner

Ryan M Flandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 15 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 06 March 2003 and 25 July 2003 were filed after the mailing date of the first non-final rejection on 13 January 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

Drawings

3. In light of Applicant's arguments and proposed drawing changes in the response submitted 15 April 2003, the objections to the drawings previously set forth have been overcome. The proposed drawing changes were received on 15 April 2003. The drawing changes are acceptable.

Claim Rejections - 35 USC § 112

4. In light of Applicant's cancellation of claim 13 and amendment to claim 15, the Examiner respectfully withdraws the rejection of these claims under 35 USC §112, first paragraph. Likewise, Applicant's amendment to claim 15 regarding recitation of "elastic deformation" have properly overcome the rejection previously set forth under 35 USC §112, second paragraph.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims are rejected under 35 U.S.C. 102(b) as being anticipated by Mileti (US 4,190,275).

a. Claim 1. Mileti clearly shows and discloses a roadway crash cushion comprising a collapsible, substantially self-restoring collapsing portion 14,16,18, or 20 comprising a pair of substantially parallel panels 22 formed substantially of a thermoplastic material (see figures 5,6,8,9; column 1 lines 43-49; column 2 lines 26-61; column 4 lines 43-51).

b. Claim 2. Mileti further discloses at least one cambered portion 25,26 in each of said panels 22 (see especially figure 6).

c. Claim 4. Mileti further shows and discloses at least one substantially rectangular supporting frame 24 (or 60, 62, 64, 66, 68) that is secured to each of the panels 22 (see figures 1-3, 8, and 9).

d. Claim 5. Mileti further shows and discloses a longitudinal, ground mounted rail member 86 and wherein the supporting frame 24 (or 60, 62, 64, 66, 68) engages the rail member 86 (via element 80) for longitudinal movement along the rail member 86 (see figures 8 and 9).

- e. Claim 6. Mileti further shows and discloses each of the panels 22 has a cambered portion 25,26 that provides a point of flexure for the panel 22 (see figures 5 and 6; column 2 lines 54-61).
- f. Claim 7. Mileti further shows and discloses a nose piece 40 (see figure 3).
- g. Claim 8. Mileti clearly shows and discloses a roadway crash cushion comprising a collapsible cushion portion 14,16,18, or 20 having a cambered panel member 22 that collapsibly folds during a collision and, due to shape memory, will substantially return to an unfolded condition following a collision (see column 1 lines 43-49; column 2 lines 26-61; column 4 lines 43-51).
- h. Claim 9. Mileti further shows and discloses a ground-mounted longitudinal basetrack 86; a plurality of substantially rigid diaphragms 24 (or 60, 62, 64, 66, 68) that are affixed to the panel member 22, the diaphragms 24 (or 60, 62, 64, 66, 68) each engaging the basetrack 86 (via 80) for slidable movement thereupon (see figures 8 and 9). Note that the Examiner has broadly read the term diaphragm according to the following definition: "any membrane or partition that separates one thing from another."¹
- i. Claim 10. Mileti further shows that the basetrack 86 comprises a pair of parallel rail members (see figures 8 and 9).
- j. Claim 11. Mileti further each diaphragm 24 (or 60, 62, 64, 66, 68) comprises an enlarged rectangular upper portion to which the panel members 22 are secured (see figures 8 and 9).

¹ Webster's New World Dictionary of the American Language, Second College Edition, ©1980.

k. Claim 12. Mileti further shows and discloses each diaphragm 24 (or 60, 62, 64, 66, 68) comprises a lower portion having a pair of shoes 80 for slidably engaging the rail members 86 (see figures 8 and 9).

l. Claim 14. Mileti further shows and discloses a nose piece 40 formed of a sheet of plastic bent substantially into a "U" shape (see figure 3).

m. Claim 15. Mileti shows and discloses a roadway crash cushion comprising a longitudinal ground-mounted basetrack 86 that comprises a pair of parallel rail members (see figures 8 and 9); a pair of planar panel members 22 that are positioned parallel to one another and in a substantially vertical orientation, the panel members 22 each having a cambered portion 25,26 (see figures 5 and 6) that promotes elastic deformation of the panel member 22 along the cambered portion 25,26; a plurality of diaphragms 24 (or 60, 62, 64, 66, 68) for securing the panel members 22 to each other and to the basetrack 86, the diaphragms 24 (or 60, 62, 64, 66, 68) each comprising a pair of shoes 80 for sliding engagement of the diaphragm 24 (or 60, 62, 64, 66, 68) to the basetrack rail members 86; and a tension cable 34 (column 3 lines 4-9) affixed to at least one diaphragm 24 (or 60, 62, 64, 66, 68) (see figures 2, 3, 5, 6, 8 and 9).

n. Claim 16. Mileti further shows and discloses that the panel members 22 and diaphragms 24 (or 60, 62, 64, 66, 68) are secured to one another to form a linear array of closed crushable cells 14,16,18,20 (see figures 2, 3, 5, 6, 8, and 9).

o. Claim 18. Mileti further shows the cells 14,16,18,20 have different sizes to provide for separate collapsible zones within the array of cells 14,16,18,20 (see figures 2 and 3).

p. Claim 19. Mileti further shows the array of cells 14,16,18,20 has a pair of primary collapsible zones (20 and 14) located at upstream and downstream ends (respectively) of the array (see figures 2 and 3).

q. Claim 20. Mileti further shows the array of cells 14,16,18,20 has a secondary collapsible zone (18 and 16) located between the primary collapsible zones (20 and 14) (see figures 2 and 3).

Claim Rejections - 35 USC § 103

7. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mileti, as applied above, in view of McFadden et al (US 5,746,419) (McFadden).

a. Claim 3. As set forth above, Mileti discloses a thermoplastic material but lacks explicit disclosure that said material is polyethylene. McFadden clearly teaches that polyethylene is commonly used as a thermoplastic in the energy absorption art for its shape memory characteristics (see column 1 lines 25-29). Inasmuch as the references disclose these elements as art recognized equivalents, it would have been obvious to one of ordinary skill in the art to substitute one for the other. In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982). Additionally, the Applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made modify the material of Mileti by providing

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polyethylene since polyethylene is a common thermoplastic used in energy absorption as taught by McFadden.

b. Claim 17. Also, Mileti further lacks a teaching that the cells 14,16,18,20 are hexagonally shaped. McFadden, however, teaches that a hexagonal structure is advantageous for providing a high strength structure with good deflective characteristics (see column 3 lines 6-13). In any event, a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made shape of the cells of Mileti by providing that they be hexagonal in shape since such shape is common in energy absorption structures for providing good deflective characteristics as taught by McFadden.

Response to Amendment

8. The affidavit filed on 15 April 2003 under 37 CFR 1.131 is sufficient to overcome the Stephens reference. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Mileti. Rejections set forth above.

Conclusion

9. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 25 July 2003 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to INVENTION:

U.S. Patent 4,321,989 to Meinzer

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M Flandro whose telephone number is (703) 305-6952. The examiner can normally be reached on 8:30am - 5:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

RMF



John H. Collingsworth
Patent Examiner

Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670